

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	1.995	2.005	50.67	50.93	
C	0.495	0.506	12.57	12.83	
E	0.990	1.010	25.15	25.65	
F	2.390	2.410	60.71	61.21	
G	1.490	1.510	37.85	38.35	
H	0.120	0.130	3.05	3.30	
J	---	0.400	---	10.16	
K	0.240	0.260	6.10	6.60to	Lead ϕ
L	0.490	0.510	12.45	12.95	
M	0.040	.050	1.02	1.27	Square
N	0.175	0.195	4.45	4.95	Dia
P	0.032	0.052	0.81	1.32	

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
FST10130*	30V	30V
FST10135*	35V	35V
FST10140*	40V	40V
FST10145*	45V	45V

*Add Suffix A for Common Anode, D for Doubler

- Schottky Barrier Rectifier
- Guard Ring for Reverse Protection
- Low forward voltage
- V_{RRM} 30 to 45 Volts
- Electrically isolated base
- Reverse Energy Tested
- Center tap

Electrical Characteristics

Average forward current per pkg	$I_F(AV)$ 100 Amps	$T_C = 85^\circ C$, Square wave, $R_{\theta JC} = 0.5^\circ C/W$
Average forward current per leg	$I_F(AV)$ 50 Amps	$T_C = 85^\circ C$, Square wave, $R_{\theta JC} = 1.0^\circ C/W$
Maximum surge current per leg	I_{FSM} 1000 Amps	8.3 ms, half sine $T_J = 175^\circ C$
Max repetitive peak reverse current per leg	$I_R(OV)$ 2 Amps	$f = 1$ KHz, $25^\circ C$, 1 μsec Square wave
Max peak forward voltage per leg	V_{FM} .48 Volts	$I_{FM} = 50A$: $T_J = 125^\circ C^*$
Max peak forward voltage per leg	V_{FM} .53 Volts	$I_{FM} = 50A$: $T_J = 25^\circ C^*$
Max peak reverse current per leg	I_{RM} 600 mA	V_{RRM} , $T_J = 125^\circ C^*$
Max peak reverse current per leg	I_{RM} 2 mA	V_{RRM} , $T_J = 25^\circ C$
Typical junction capacitance per leg	C_J 2700 pF	$V_R = 5.0V$, $T_J = 25^\circ C$

*Pulse test: Pulse width 300 μsec , Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	$-55^\circ C$ to $175^\circ C$
Operating junction temp range	T_J	$-55^\circ C$ to $125^\circ C$
Max thermal resistance per leg	$R_{\theta JC}$	$1.0^\circ C/W$ Junction to case
Max thermal resistance per pkg.	$R_{\theta JC}$	$0.5^\circ C/W$ Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	$0.1^\circ C/W$ Case to sink
Mounting torque		15–20 inch pounds
Weight		2.5 ounces (71 grams) typical

FST10130 — FST10145

Figure 1
Typical Forward Characteristics – Per Leg

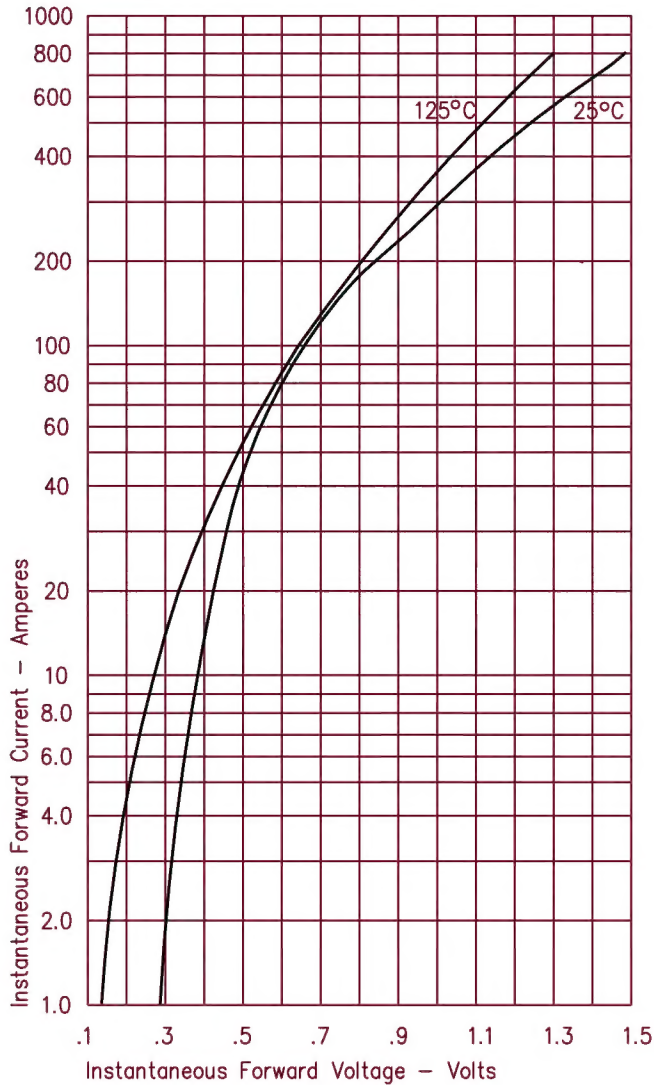


Figure 3
Typical Junction Capacitance – Per Leg

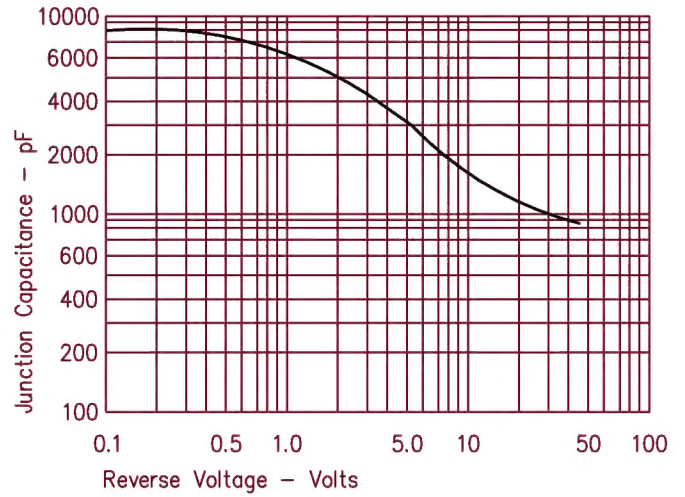


Figure 4
Forward Current Derating – Per Leg

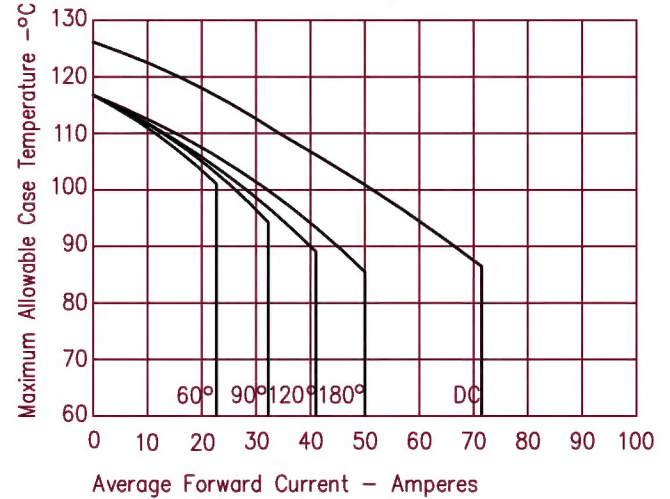


Figure 2
Typical Reverse Characteristics – Per Leg

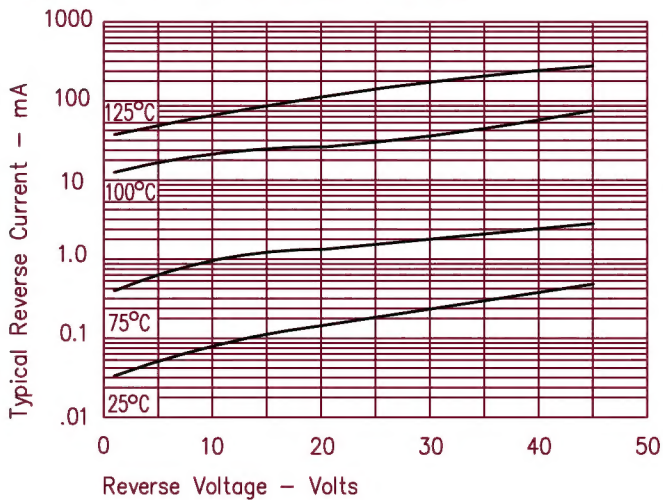


Figure 5
Maximum Forward Power Dissipation – Per Leg

